

WHAT IS CLAIMED IS:

1. A sheet processing apparatus, comprising:

a first roller pair conveying a sheet received from an external apparatus;

a second roller pair conveying the sheet conveyed from the first roller pair;

a jogging tray configured to receive the sheet conveyed from the second roller pair and jog the received sheet; and

a binding device configured to bind a stack of sheets received and jogged by the jogging tray,

wherein the second roller pair can be driven to rotate such that sheets received from the external apparatus and conveyed by the first roller pair one after another are pinched by the second roller pair one after another while being overlapped one upon another with leading edges thereof shifted stepwise one after another and are held by the second roller pair to be further conveyed to the jogging tray.

2. The sheet processing apparatus according to Claim 1:

wherein the second roller pair is driven to intermittently rotate so that sheets conveyed by the first roller pair one after another are pinched by the second roller pair one after another while being overlapped one upon another with leading edges thereof shifted stepwise one after another and are held by the second roller pair to be further conveyed to the jogging tray.

3. The sheet processing apparatus according to Claim 1:

wherein the second roller pair is driven to rotate at a circumferential speed that is slower than that of the first roller pair so that sheets conveyed by the first roller pair one after another are pinched by the second roller pair one after another while being overlapped one upon another with leading edges thereof shifted stepwise one after another and are held by the second roller pair to be further conveyed to the jogging tray.

4. The sheet processing apparatus according to Claim 1, wherein the sheet received from the external device is conveyed from the first roller pair to the second roller pair through a conveying path between the first roller pair and the second roller pair and an open area is provided to the conveying path so that when the second roller pair is driven to rotate such that sheets conveyed by the first roller pair one after another are pinched by the second roller pair one after another while being overlapped one upon another with leading edges thereof shifted stepwise one after another, a trailing edge of each of the sheets conveyed by the first roller pair one after another can retreat from the conveying path to the open area after the sheet has been pinched by the second roller pair.

5. The sheet processing apparatus according to Claim 4, further comprising a discharging device configured to cause the trailing edge of each of the sheets conveyed by the first roller pair one after another to retreat from the conveying path to

the open area after the sheet has been pinched by the second roller pair.

6. The sheet processing apparatus according to Claim 4, further comprising a bulging device arranged at the conveying path and configured to cause, when the second roller pair is driven to rotate such that sheets conveyed by the first roller pair one after another are pinched by the second roller pair one after another while being overlapped one upon another with leading edges thereof shifted stepwise one after another, each of the sheets conveyed by the first roller pair one after another to bulge toward the open area when pinched by the second roller pair so that a trailing edge thereof retreats from the conveying path to be discharged into the open area.

7. The sheet processing apparatus according to Claim 4, further comprising a moving guide device configured to guide the sheet being conveyed by the first roller pair to be conveyed through the conveying path and to move to provide the open area to the conveying path when the second roller pair is driven to rotate such that sheets conveyed by the first roller pair one after another are pinched by the second roller pair one after another while being overlapped one upon another with leading edges thereof shifted stepwise one after another so that each of the sheets conveyed by the first roller pair and pinched by the second roller pair bulges toward the open area and when a trailing edge thereof has been released from the first roller

pair, the trailing edge thereof retreats from the conveying path to be discharged into the open area.

8. The sheet processing apparatus according to Claim 1, wherein when the binding device is performing a binding operation, the second roller pair is driven to rotate such that sheets conveyed by the first roller pair one after another are pinched by the second roller pair one after another while being overlapped one upon another with leading edges thereof shifted stepwise one after another and are held by the second roller pair to be further conveyed to the jogging tray.

9. The sheet processing apparatus according to Claim 8, wherein the sheets held by the second roller pair are conveyed by the second roller pair to be discharged onto the jogging tray after completion of the binding operation.

10. The sheet processing apparatus according to Claim 1, further comprising:

a discharging device discharging the stack of sheets bound by the binding device from the jogging tray, and

wherein when the stack of sheets bound by the binding device has not been discharged from the jogging tray in a predetermined period of time or when the jogging tray has not returned to a reference position in a predetermined period of time, the second roller pair is driven to rotate such that sheets conveyed by the first roller pair one after another are pinched

by the second roller pair one after another while being overlapped one upon another with leading edges thereof shifted stepwise one after another and are held by the second roller pair to be further conveyed to the jogging tray.

11. The sheet processing apparatus according to Claim 1, wherein the external device is an image forming apparatus.

12. A sheet processing apparatus, comprising:

first means for conveying a sheet received from an external apparatus;

second means for conveying the sheet conveyed from the first conveying means;

jogging means for receiving the sheet conveyed from the second conveying means and jogging the received sheet; and

binding means for binding a stack of sheets received and jogged by the jogging means,

wherein the second conveying means can be driven to rotate such that sheets received from the external apparatus and conveyed by the first conveying means one after another are pinched by the second conveying means one after another while being overlapped one upon another with leading edges thereof shifted stepwise one after another and are held by the second conveying means to be further conveyed to the jogging means.

13. A sheet processing method, comprising:

receiving a sheet conveyed from an external apparatus at

a speed;

conveying the received sheet with a first roller pair at a circumferential speed corresponding to the speed;

conveying the sheet conveyed from the first roller pair with a second roller pair at the circumferential speed corresponding to the speed;

receiving the sheet conveyed from the second roller pair and jogging the received sheet with a jogging tray; and

binding a stack of sheets received and jogged by the jogging tray,

wherein when the receiving and jogging step or the binding step is being performed, the second roller pair rotates at a decreased circumferential speed so that sheets received from the external apparatus and conveyed by the first roller pair one after another are pinched by the second roller pair one after another while being overlapped one upon another with leading edges thereof shifted stepwise one after another and are held by the second roller pair to be further conveyed to the jogging tray.